

**Notice of Allowability**

Application No.

10/706,796

Examiner

BARBARA N. BURGESS

Applicant(s)

GHETIE ET AL.

Art Unit

2457

– The **MAILING DATE** of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Request for Continuation Examination (RCE) filed.
2. ☒ The allowed claim(s) is/are 1,5-7 and 17-25.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 6-25-09
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 8-12-09
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

/ARIO ETIENNE/  
Supervisory Patent Examiner, Art Unit 2457

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Paul Hunter on Wednesday, August 12, 2009.

### **IN THE CLAIMS**

Please **CANCEL** claims 2-4, 8-16 without prejudice.

Please **AMEND** claims 1, 17, 19, 24 as follow:

1. (Currently Amended) A system for managing quality of service (QoS) for traffic flows generated by a plurality of hosts separated by one or more networks wherein at least one of the networks is enabled with a set of traffic classes, said system comprising:  
  
a services manager, and  
  
a middleware module at at least one of the plurality of hosts, wherein said middleware module at the at least one host receives a QoS request for a traffic flow the host generates and conveys a QoS provisioning request to the services manager upon receiving the QoS request for the traffic flow;

wherein said services manager receives the QoS provisioning request from said middleware module, obtains a DSCP (Differentiated Services Code Point) value for the traffic flow only if it is determined that the networks the traffic flow traverses can support the flow, and if a DSCP value is obtained, conveys the obtained DSCP value for the traffic flow to said middleware module;

wherein said middleware module uses the obtained DSCP value received from the services manager to mark the DSCP field of packets of the traffic flow;

wherein the services manager, upon receiving the QoS provisioning request, determines the networks the traffic flow traverses, and as part of obtaining the DSCP value further determines if for each traffic class enabled network the traffic flow traverses there is sufficient bandwidth in a traffic class to support the traffic flow;

wherein the QoS request contains an identification of the traffic flow and wherein the middleware module conveys this identification to the services manager as part of the QoS provisioning request;

wherein the services manager, upon receiving the QoS provisioning request, determines a default traffic flow characterization for the traffic flow based on the traffic flow identification, and uses the default traffic flow characterization to obtain a DSCP value by determining if the networks the traffic flow traverses can support the flow based on the characterization; and

wherein if the services manager cannot obtain a DSCP value based on the determined default traffic flow characterization, the services manager determines an alternate traffic

flow characterization for the traffic flow based on the traffic flow identification, and uses the determined alternate traffic flow characterization to obtain a DSCP value by determining if the networks the traffic flow traverses can support the flow based on the alternate characterization.

17. (Original) A system at a host for managing quality of service (QoS) for a plurality of traffic flows traversing one or more networks wherein at least one of the networks is enabled with a set of traffic classes, said system comprising:

a signaling client for generating QoS provisioning requests for one or more of the plurality of traffic flows,

a middleware control module for receiving the QoS provisioning requests and for conveying the requests to a services manager intended for determining which of the one or more networks any given traffic flow of the plurality of traffic flows traverses and for obtaining a DSCP (Differentiated Services Code Point) value that corresponds to a determined network that is traffic class enabled and is the first network the any given traffic flow traverses, and

a policy enforcement module for receiving the determined DSCP values for the one or more of the plurality of traffic flows that are generated by the host wherein said policy enforcement module uses the DSCP values to mark the transmitted packets corresponding to the one or more of the plurality of traffic flows that are generated by the host;

wherein the services manager, upon receiving the QoS provisioning request, determines the networks the traffic flow traverses, and as part of obtaining the DSCP value further determines if for each traffic class enabled network the traffic flow traverses there is sufficient bandwidth in a traffic class to support the traffic flow;

wherein the QoS request contains an identification of the traffic flow and wherein the middleware module conveys this identification to the services manager as part of the QoS provisioning request,

wherein the services manager, upon receiving the QoS provisioning request, determines a default traffic flow characterization for the traffic flow based on the traffic flow identification, and uses the default traffic flow characterization to obtain a DSCP value by determining if the networks the traffic flow traverses can support the flow based on the characterization;

wherein if the services manager cannot obtain a DSCP value based on the determined default traffic flow characterization, the services manager determines an alternate traffic flow characterization for the traffic flow based on the traffic flow identification, and uses the determined alternate traffic flow characterization to obtain a DSCP value by determining if the networks the traffic flow traverses can support the flow based on the alternate characterization.

19. (Currently Amended) A method for managing quality of service (QoS) for traffic flows generated by a plurality of hosts interconnected by one or more networks wherein

at least one of the networks is enabled with a set of traffic classes, said method comprising:

receiving, at a services manager, a QoS provisioning request from a middleware module for any given traffic flow, determining traffic attributes for the given traffic flow, obtaining a DSCP (Differentiated Services Code Point) value for the given traffic flow based on whether the networks the traffic flow traverses can support the flow given the determined traffic attributes,

conveying an obtained DSCP value to a first of two hosts when the traffic flow is from a first to a second host;

wherein the services manager, upon receiving the QoS provisioning request, determines the networks the traffic flow traverses, and as part of obtaining the DSCP value further determines if for each traffic class enabled network the traffic flow traverses there is sufficient bandwidth in a traffic class to support the traffic flow;

wherein the QoS request contains an identification of the traffic flow and wherein the middleware module conveys this identification to the services manager as part of the QoS provisioning request,

wherein the services manager, upon receiving the QoS provisioning request, determines a default traffic flow characterization for the traffic flow based on the traffic flow identification, and uses the default traffic flow characterization to obtain a DSCP value by determining if the networks the traffic flow traverses can support the flow based on the characterization;

wherein if the services manager cannot obtain a DSCP value based on the determined default traffic flow characterization, the services manager determines an alternate traffic flow characterization for the traffic flow based on the traffic flow identification, and uses the determined alternate traffic flow characterization to obtain a DSCP value by determining if the networks the traffic flow traverses can support the flow based on the alternate characterization.

24. (Currently Amended) A method executed by a first host for managing quality of service (QoS) for a plurality of traffic flows traversing one or more networks wherein at least one of the networks is enabled with a set of traffic classes, said method comprising:

receiving, at a middleware module at a client device, a QoS provisioning request for any given traffic flow, conveying the request from the middleware module at the client device to a services manager intended for determining which of the one or more networks the any given traffic flow traverses and for obtaining a DSCP (Differentiated Services Code Point) value corresponding to a determined network that is traffic class enabled and is the first network the traffic flow traverses,

receiving the determined DSCP value when the given traffic flow is generated by a host, and

marking the transmitted packets of the given traffic flow at the client device with the DSCP value;

wherein the services manager, upon receiving the QoS provisioning request, determines the networks the traffic flow traverses, and as part of obtaining the DSCP value further determines if for each traffic class enabled network the traffic flow traverses there is sufficient bandwidth in a traffic class to support the traffic flow;

wherein the QoS request contains an identification of the traffic flow and wherein the middleware module conveys this identification to the services manager as part of the QoS provisioning request,

wherein the services manager, upon receiving the QoS provisioning request, determines a default traffic flow characterization for the traffic flow based on the traffic flow identification, and uses the default traffic flow characterization to obtain a DSCP value by determining if the networks the traffic flow traverses can support the flow based on the characterization;

wherein if the services manager cannot obtain a DSCP value based on the determined default traffic flow characterization, the services manager determines an alternate traffic flow characterization for the traffic flow based on the traffic flow identification, and uses the determined alternate traffic flow characterization to obtain a DSCP value by determining if the networks the traffic flow traverses can support the flow based on the alternate characterization.

### ***Conclusion***



Any inquiry concerning this communication or earlier communications from the examiner should be directed to BARBARA N. BURGESS whose telephone number is (571)272-3996. The examiner can normally be reached on M-F (8:00am-4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Barbara N Burgess/  
Examiner, Art Unit 2457

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Examiner  
Art Unit 2457

August 13, 2009

/ARIO ETIENNE/  
Supervisory Patent Examiner, Art Unit 2457